7th March

Corbettmaths

$f(x) = 2x^4 + 1$

$g(x) = \sqrt{x-2}$

Find and simplify $fg(x)$

Find where the matrix $\begin{pmatrix} 8 & -1 \\ -7 & 0 \end{pmatrix}$ maps the point $(-4, 1)$

Solve

$x^{\frac{2}{3}} + 2x^{-\frac{1}{3}} = 3x^{\frac{5}{3}}$

The equation of a curve is $y = x^3 - \frac{1}{2}x^2 + ax + 1$ where a is a constant

The curve has a maximum point at $\left(-\frac{2}{3}, \frac{49}{27}\right)$

The curve has a minimum point at $(1, -0.5)$

Work out the value of a